

Chemical/Biological Terrorism

April, 2004

1: Acad Med. 2004 Apr;79(4):366-375.

Guidelines for Preclerkship Bioterrorism Curricula.

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PURPOSE: To develop medical school curriculum guidelines related to bioterrorism to ensure that future medical graduates are armed with the critical knowledge, skills, and attitudes to face this emerging threat. **METHOD:** An Internet-based Delphi survey was performed in 2002 under the auspices of the Association of Medical School Microbiology and Immunology Chairs involving 64 medical educators in microbiology, immunology, and infectious diseases representing 54 U.S. medical schools. A 12-member bioterrorism expert reference panel participated in the final phase of the survey. **RESULTS:** Study participants identified the top educational objectives for the following bioterrorism-related curriculum categories: general issues, biodefense, public health, infection control, infectious diseases, and toxins. **CONCLUSION:** The study focused on preparedness training through the development of curricular guidelines in predominantly preclerkship medical education by identifying basic science and clinical laboratory aspects of putative biologic weapons organisms and toxins, clinical manifestations of bioterrorist attacks, treatment strategies, epidemiology, and prophylaxis.

PMID: 15044173 [PubMed - as supplied by publisher]

2: Biosecur Bioterror. 2004;2(1):47-50.

Ready or Not? Protecting the Public's Health in the Age of Bioterrorism.

[No authors listed]

PMID: 15068678 [PubMed - as supplied by publisher]

3: Biosecur Bioterror. 2003;1(4):259-65.

Sources of bioterrorism information among emergency physicians during the 2001 anthrax outbreak.

M'ikanatha NM, Lautenbach E, Kunselman AR, Julian KG, Southwell BG, Allswede M, Rankin JT, Aber RC.

Pennsylvania Department of Health, Harrisburg, Pennsylvania, USA.

nmikanatha@state.pa.us

PMID: 15040206 [PubMed - in process]

4: Biosecur Bioterror. 2003;1(3):221-2.

Aerosols from insect control measures show dangers of bioterrorism.

Hartley DM, Peters CJ.

Publication Types: Letter

PMID: 15040200 [PubMed - in process]

5: Biosecur Bioterror. 2003;1(3):223-4.

Homeland insecurity: building the expertise to defend America from bioterrorism.

[No authors listed]

PMID: 15040201 [PubMed - in process]

6: Biosecur Bioterror. 2003;1(3):169-84.

Vaccine liability in the era of bioterrorism.

Mair JS, Mair M.

Center for Law and the Public's Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA. jmair@jhsph.edu

PMID: 15040195 [PubMed - in process]

7: Biosecur Bioterror. 2003;1(2):139-44.

The psychological impacts of bioterrorism.

Hall MJ, Norwood AE, Ursano RJ, Fullerton CS.

Department of Psychiatry, Uniformed Services University, Bethesda, Maryland, USA. mhall@usuhs.mil

PMID: 15040192 [PubMed - in process]

8: Biosecur Bioterror. 2003;1(2):117-22.

Microbial forensics: building a national capacity to investigate bioterrorism.

Murch RS.

Institute for Defense Analyses, 4850 Mark Center Drive, Alexandria, VA 22311-1882, USA. rmurch@ida.org

PMID: 15040189 [PubMed - in process]

9: Biosecur Bioterror. 2003;1(4):273-81.

The role of schools in meeting community needs during bioterrorism.

Stein BD, Tanielian TL, Vaiana ME, Rhodes HJ, Burnam MA.

RAND, Santa Monica, California. stein@rand.org

PMID: 15040208 [PubMed - in process]

10: Bull World Health Organ. 2003;81(12):917-8. Epub 2004 Mar 01.

Conference warns of danger of re-emergence of smallpox as weapon of bioterror.

Fleck F.

Publication Types: Congresses News

PMID: 14997249 [PubMed - indexed for MEDLINE]

11: Cell Microbiol. 2003 Nov;5(11):755-60.

Innate immunity and biodefence vaccines.

Valiante NM, O'Hagan DT, Ulmer JB.

Vaccines Research, Chiron Corporation, 4560 Horton St, Emeryville, CA 94608, USA.
Host defence in vertebrates is achieved by the integration of two distinct arms of the immune system: the innate and adaptive responses. The innate response acts early after infection (within minutes), detecting and responding to broad cues from invading pathogens. The adaptive response takes time (days to weeks) to become effective, but provides the fine antigenic specificity required for complete elimination of the pathogen and the generation of immunologic memory. Antigen-independent recognition of pathogens by the innate immune system leads to the rapid mobilization of immune effector and regulatory mechanisms that provide the host with three critical advantages: (i) initiating the immune response (both innate and adaptive) and providing the inflammatory and co-stimulatory context for antigen recognition; (ii) mounting a first line of defence, thereby holding the pathogen in check during the maturation of the adaptive response; and (iii) steering the adaptive immune system towards the cellular or humoral responses most effective against the particular infectious agent. The quest for safer and more effective vaccines and immune-based therapies has taken on a sudden urgency with the increased threat of bioterrorism. Only a handful of vaccines covering a small proportion of potential biowarfare agents are available for human use (e.g. anthrax and small pox) and these suffer from poor safety profiles. Therefore, next generation biodefence-related vaccines and therapies with improved safety and the capacity to induce more rapid, more potent and broader protection are needed. To this end, strategies to target both the innate and adaptive immune systems will be required.
Publication Types: Review Review, Tutorial
PMID: 14531891 [PubMed - indexed for MEDLINE]

12: Cell Transplant. 2003;12(6):553-4.

Cell therapy and homeland security: funding opportunities for biomedical research.
Marty PJ, Sanberg PR, Daugherty RM.
Publication Types: Editorial
PMID: 14579922 [PubMed - indexed for MEDLINE]

13: Clin J Oncol Nurs. 2004 Feb;8(1):51-5.

Oncology nursing implications related to smallpox bioterrorism preparations.
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Although smallpox was globally eradicated in 1977, the current threat of smallpox as a bioterrorism agent is unknown. Based on intelligence reports, the U.S. government and public health sectors have recommended smallpox vaccination for very select individuals. Patients with cancer are at particular risk for complications from the smallpox vaccine because of potential immunosuppression. Vaccinated nurses caring for these patients also need to take special precautions because of the possibility of secondary transmission of this live vaccine to patients. This article reviews background information on bioterrorism, the presentation and clinical features of smallpox, contraindications to the smallpox vaccine, and implications for oncology nurses.

Publication Types: Review Review, Tutorial
PMID: 14983764 [PubMed - indexed for MEDLINE]

14: Clin Lab Sci. 2004 Winter;17(1):30-4.

Botulin toxin: a weapon in terrorism.

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Clostridium botulinum, the causative agent of botulism is an anaerobic, spore forming gram-positive bacillus. *C. botulinum* causes three types of botulism; foodborne botulism, wound botulism, and infant botulism. Most strains of the bacterium produce a potent, muscle-paralyzing neurotoxin. Respiratory failure secondary to paralysis of the respiratory muscles can lead to death unless appropriate therapy is promptly initiated. Due to the severity and potency of this neurotoxin, its importance as a biological weapon is of major concern to public health officials.

Publication Types: Review Review, Tutorial

PMID: 15011978 [PubMed - indexed for MEDLINE]

15: Clin Lab Sci. 2004 Winter; 17(1):35-9.

Francisella tularensis: possible agent in bioterrorism.

Gallagher-Smith M, Kim J, Al-Bawardy R, Josko D.

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Francisella tularensis, the causative agent of tularemia, is a highly infectious gram-negative coccobacillus. Due to its high infectivity it is of major concern to public health officials as a possible biological weapon. Although accidental exposure can occur through arthropod bites, handling infected animals, or breathing in aerosols, cases are usually isolated and contained. In the event of an intentional exposure such as in a bioterrorist attack, inhalation of aerosols can result in devastating consequences with much causality. Although a vaccine is available, sufficient quantities may not be readily accessible in an actual attack. Therefore, it is very important for both medical professionals and public health officials to be prepared to contain and control the situation should it actually occur.

Publication Types: Review Review, Tutorial

PMID: 15011979 [PubMed - indexed for MEDLINE]

16: Clin Lab Sci. 2004 Winter; 17(1):25-9.

Yersinia pestis: still a plague in the 21st century.

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Yersinia pestis, the causative agent of plague, is an aerobic, non-motile, gram-negative bacillus belonging to the family Enterobacteriaceae. It is a zoonotic infection transmitted to humans via the bite of a flea. Three clinical forms of human plague exist: bubonic, pneumonic, and septicemic. Many important virulence factors associated with this organism are responsible for its extreme pathogenicity and high mortality rates. The bubonic form of plague is usually not transmitted human to human but the pneumonic form is--through inhalation of contaminated aerosol droplets. The pneumonic plague would be the form most likely implicated in the event of an intentional attack. Inhalation of aerosols can cause devastating consequences resulting in many casualties. Unless

antibiotics are administered within 24 hours of the initial symptoms, death is inevitable. Its potential for use as a biological weapon is of major concern to public health officials.

Publication Types: Review Review, Tutorial
PMID: 15011977 [PubMed - indexed for MEDLINE]

17: Curr Opin Investig Drugs. 2004 Feb;5(2):135-40.

Current therapy and the development of therapeutic options for the treatment of diseases due to bacterial agents of potential biowarfare and bioterrorism.

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An important part of biodefense is the optimization of current therapy and the development of new therapeutic options for the treatment of the diseases most likely encountered in the form of biological weapons. Guidelines for the prevention and treatment of anthrax, plague, tularemia and botulinum toxin intoxication are reviewed. The strategies in development for the prevention of anthrax focus primarily on active and passive immunization against protective antigen, because of its central role as a toxin delivery module. Novel vaccine strategies for plague, tularemia and botulism are also reviewed.

PMID: 15043386 [PubMed - in process]

18: Disaster Manag Response. 2003 Oct-Dec;1(4):114-8.

Lessons learned: the "pale horse" bioterrorism response exercise.

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The city of San Antonio, Texas, and the Fort Sam Houston Army Post conducted a bioterrorism response exercise to test the command infrastructure in a large tabletop exercise. A number of local, state, and federal agencies participated in the exercise. The scenario, program format, and multiple lessons learned from this experience are described. Needs for additional services, planning, and legal issues are identified.

PMID: 14666097 [PubMed - indexed for MEDLINE]

19: Disaster Manag Response. 2003 Oct-Dec;1(4):110-3.

Considerations for chemical decontamination shelters.

Hudson TL, Reilly K, Dulaigh J.

US Army, USA. Timothy.Hudson@us.army.mil

Publication Types: Review Review, Tutorial

PMID: 14666096 [PubMed - indexed for MEDLINE]

20: Eur J Anaesthesiol. 2002 Mar;19(3):166-9.

Airway management by physicians wearing anti-chemical warfare gear: comparison between laryngeal mask airway and endotracheal intubation.

Goldik Z, Bornstein J, Eden A, Ben-Abraham R.

Lady Davis Carmel Medical Center, Department of Anesthesiology and Intensive Care, and The Rappaport School of Medicine, Technion, Haifa, Israel.

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BACKGROUND AND OBJECTIVE: To evaluate the ease with which successful insertion of a laryngeal mask airway can be performed in comparison with endotracheal intubation by medical personnel wearing chemical protective equipment. METHODS: Anaesthetists and non-anaesthetists (each n = 20) participated in the prospective comparative trial in an animal laboratory. The time and success rates of laryngeal mask airway vs. endotracheal tube insertions were measured as performed on anaesthetized monkeys. RESULTS: The results showed that the laryngeal mask airway was inserted more rapidly than the endotracheal tube by both groups (3.6 s and 28.6 s, $P < 0.0001$). Failed intubation occurred in 35% (anaesthetists) vs. 55% (non-anaesthetists) ($P = 0.17$). CONCLUSIONS: In view of the 100% success rate of insertion even in unfavourable conditions, the possible role of the laryngeal mask airway in the scenario of a toxic mass casualty event should be considered. PMID: 12071234 [PubMed - indexed for MEDLINE]

21: Exp Biol Med (Maywood). 2004 Apr;229(4):345-50.

Fate of bioterrorism-relevant viruses and bacteria, including spores, aerosolized into an indoor air environment.

Utrup LJ, Frey AH.

Randomline, Inc, Potomac, Maryland 20854, USA.

An aerosol physics test facility was used in a series of eight experiments to gather an integrated comprehensive broad base of data on the fate of surrogates of microorganisms that cause smallpox, plague, glanders, anthrax, and viral hemorrhagic fevers. The results are directly relevant to the public health issue of how to protect the occupants of buildings against bioterrorism. The test conditions were directly relevant to the indoor air environment situation, and the results can be generalized to buildings that are now occupied. The reductions in concentrations of relevant viruses and bacteria—including gram-negative fermenters and nonfermenters, gram-positive cocci and bacilli, and spores--were substantial and statistically robust. The data show that the bioterrorism-relevant aerosolized viruses and bacteria, including spores, respond like small particulates to the primary (electrical) forces that control the distribution of small particulates in a room. Further, these relevant microorganisms respond like small particulates to means designed to control airborne particulates. The results could be used to anticipate the effects of a bioterrorist attack on the public health, provide information on means that can be used to minimize such effects, and used to make decisions on how best to protect occupants of specific buildings at minimal cost and with assurance of success.

PMID: 15044718 [PubMed - in process]

22: Healthc Inform. 2004 Feb;21(2):40-2, 44.

Battling bioterror.

Featherly K.

PMID: 15004908 [PubMed - indexed for MEDLINE]

23: IDrugs. 2004 Feb;7(2):96-9.

Bioterrorism and emerging infectious disease - antimicrobials, therapeutics and immune-modulators. Viral infections.

de la Torre JC.

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PMID: 15057646 [PubMed - in process]

24: IDrugs. 2004 Feb; 7(2): 91-5.

Bioterrorism and emerging infectious disease - antimicrobials, therapeutics and immune-modulators. SARS coronavirus.

Shurtleff AC.

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The purpose of this meeting was to provide a forum for expert presentations and discussion about the threats of bioterrorism and emerging infectious diseases, and to address the issues relating to epidemics, prevention of infection and treatment of some of these emerging infectious diseases classified as potential agents of bioterror. Included in the talks were state-of-the-art presentations about infectious clone technology and recombinant viruses, pathogen and receptor interactions at the cellular and molecular level, genomic responses to infection, and new information on antiviral mechanisms of action. Severe acute respiratory syndrome (SARS) and progress toward understanding the epidemic was addressed, and other sessions were presented concerning immune therapy and immunopotential of disease, siRNA and gene silencing, host responses to pathogen infections, as well as the use of genetic engineering to circumvent and direct the immune response. Many discussions were held and data were presented about possible compounds and new drugs that may have antiviral properties, yet there were few discussions of any available new drugs. This report addresses reverse genetics of SARS virus, as well as its epidemiology, and a host of different recent approaches to developing antivirals effective against SARS, including some potential vaccine candidates. Also presented are hypotheses about the human immune response to SARS infection, as well as immune therapies against botulinum and anthrax toxins. This report also addresses antiviral approaches exploiting siRNAs, and different aspects of the host immune response to many of the different dangerous pathogens discussed at this meeting. Finally, approaches to circumventing and directing the immune response using genetic engineering will be reported.

PMID: 15057645 [PubMed - in process]

25: J Am Med Inform Assoc. 2004 Mar-Apr; 11(2): 141-50. Epub 2003 Nov 21.

Implementing syndromic surveillance: a practical guide informed by the early experience.

Mandl KD, Overhage JM, Wagner MM, Lober WB, Sebastiani P, Mostashari F, Pavlin JA, Gesteland PH, Treadwell T, Koski E, Hutwagner L, Buckeridge DL, Aller RD, Grannis S.

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Syndromic surveillance refers to methods relying on detection of individual and population health indicators that are discernible before confirmed diagnoses are made. In particular, prior to the laboratory confirmation of an infectious disease, ill persons may exhibit behavioral patterns, symptoms, signs, or laboratory findings that can be tracked through a variety of data sources. Syndromic surveillance

systems are being developed locally, regionally, and nationally. The efforts have been largely directed at facilitating the early detection of a covert bioterrorist attack, but the technology may also be useful for general public health, clinical medicine, quality improvement, patient safety, and research. This report, authored by developers and methodologists involved in the design and deployment of the first wave of syndromic surveillance systems, is intended to serve as a guide for informaticians, public health managers, and practitioners who are currently planning deployment of such systems in their regions. PMID: 14633933 [PubMed - indexed for MEDLINE]

26: J Clin Microbiol. 2004 Apr;42(4):1753-5.

First international quality assurance study on the rapid detection of viral agents of bioterrorism.

Niedrig M, Schmitz H, Becker S, Gunther S, Ter Meulen J, Meyer H, Ellerbrok H, Nitsche A, Gelderblom HR, Drosten C.

Robert Koch-Institute, Berlin. Bernhard-Nocht-Institute, Hamburg. Institute of Virology, Marburg. Institute of Microbiology of the Bundeswehr, Munchen, Germany. We have conducted an international quality assurance study of filovirus, Lassa virus, and orthopox virus PCR with 24 participants. Of the participating laboratories, 45.8 and 66.7% detected virus in all plasma samples, which contained $\geq 5,000$ and $\geq 100,000$ copies per ml, respectively. Sensitivity levels were not significantly different between viruses. False-negative results were attributable to a lack of sensitivity.

PMID: 15071040 [PubMed - in process]

27: J Health Commun. 2004 Jan-Feb;9(1):67-75.

Communicating health information to an alarmed public facing a threat such as a bioterrorist attack.

Hobbs J, Kittler A, Fox S, Middleton B, Bates DW.

Department of Medicine, Brigham and Women's Hospital, Boston, MA 02115, USA. Considerable literature exists on the communication of risk to the public through channels such as television, radio, and newspapers. However, little has been written on the communication of risk through less traditional communication forms, such as the Internet. The purpose of this study was to investigate the role of the Internet as an additional source of health information to that provided by the traditional news media in managing the public's response to an emerging health risk such as a bioterrorist attack. Despite some of the Internet's advantages over traditional media, including the depth and speed in which information can be conveyed to different audiences, the Internet was underutilized during fall 2001, when it became important to convey information on the risks of anthrax. A number of developments are required if the health care system is to capitalize on the Internet's potential as a risk communication device. These developments include research into public Internet searching behavior and further development in the role of search engines and government agencies in organizing quality health information.

PMID: 14761834 [PubMed - indexed for MEDLINE]

28: J Law Med Ethics. 2003 Winter;31(4):516-23.

War, terrorism, and public health.

Sidel VW, Levy BS.

Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, New York, USA.

Publication Types: Review Review, Tutorial

PMID: 14968654 [PubMed - indexed for MEDLINE]

29: J Law Med Ethics. 2003 Winter;31(4):580-9.

"The king of terrors" revisited: the smallpox vaccination campaign and its lessons for future biopreparedness.

Schneider CP, McDonald MD.

Georgetown University, USA.

Publication Types: Historical Article Review Review, Tutorial

PMID: 14968660 [PubMed - indexed for MEDLINE]

30: J Okla State Med Assoc. 2003 Dec;96(12):575-8.

Terrorism symposium update and conclusion.

Bronze MS, Huycke MM, Greenfield RA.

Infectious Diseases Section, Department of Medicine, College of Medicine, University of Oklahoma Health Sciences Center, USA.

Publication Types: Review Review, Tutorial

PMID: 14965028 [PubMed - indexed for MEDLINE]

31: J Public Health Manag Pract. 2004 Jan-Feb;10(1):77-85.

Evaluation of the Washington State National Pharmaceutical Stockpile dispensing exercise, part II--dispensary site worker findings.

Beaten RD, Stevermer A, Wicklund J, Owens D, Boase J, Oberle MW.

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On January 24, 2002, the Washington State Department of Health, in collaboration with local and federal agencies, conducted an exercise of the Centers for Disease Control and Prevention's National Pharmaceutical Stockpile dispensing portion of the Washington State plan. This exercise included predrill planning, training, and the orchestration of services of more than 40 dispensary site workers. These workers provided education and post-exposure prophylaxis for over 230 patient volunteers in the aftermath of a simulated exposure to B. anthracis. This article discusses findings of a postdrill questionnaire completed by 90% of these dispensary site workers who provided triage, education, dispensary, security and other services during this exercise. In general, this dispensing drill promoted confidence in the worker participants and provided an opportunity for these participants to coordinate their activities. This mock bioterrorist preparedness exercise allowed worker participants and observers to review and evaluate the Washington State plan for dispensing the National Pharmaceutical

Stockpile. This article is apparently the first published account of dispensary site workers' subjective impressions and quantitative analysis of their postdrill opinions following a simulated bioterrorist post-exposure chemoprophylaxis dispensing exercise.

Publication Types: Evaluation Studies

PMID: 15018345 [PubMed - indexed for MEDLINE]

32: J Telemed Telecare. 2003;9 Suppl 2:S80-2.

Telehealth responses to bio-terrorism and emerging infections.

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Emerging infectious diseases, such as severe acute respiratory syndrome (SARS), are of huge economic importance. They are difficult to predict. The World Health Organization has a Global Outbreak Alert and Response Network, which was involved at an early stage in the SARS outbreak in 2003. Three major lessons were learned as a result of the SARS epidemic in 2003, involving communication, evidence-based action and global partnerships. It is proposed that a series of broadband global response networks should be developed. At a technical level the networks are essentially in place, such as the Internet2 global network. Suitable peripheral devices also exist. What has not yet been created is the appropriate software to allow the use of these networks, although a number of commercial products are in the process of development.

PMID: 14728771 [PubMed - indexed for MEDLINE]

33: Med Confl Surviv. 2004 Jan-Mar;20(1):1-3.

Truth [editorial]

Holdstock D.

PMID: 15015543 [PubMed - indexed for MEDLINE]

34: Med Confl Surviv. 2004 Jan-Mar;20(1):4-18.

Proliferation of biological weapons: challenges and responses.

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The threat posed by the proliferation of biological weapons (BW) confronts all strata of our society, from the individual, the nation, or the region to the truly international. The history of state-run offensive BW programmes and the attacks in the United States with powdered anthrax demonstrate that existing measures fall short of addressing this threat. This article examines the current regime and the concerns that confront it in order to suggest possible responses across the social strata that may mitigate future proliferation of BW.

Publication Types: Review Review, Tutorial

PMID: 15015544 [PubMed - indexed for MEDLINE]

35: Med Health R I. 2003 Dec;86(12):401-2.

GAO's evaluation of the public health response to the anthrax incidents of 2001, with notes on the Rhode Island experience.

Fulton JP.

Division of Disease Prevention and Control, Rhode Island Department of Health, USA.

PMID: 14983545 [PubMed - indexed for MEDLINE]

36: Med Health R I. 2003 Jul;86(7):201-3.

Biodefense: medicine in the time of bioterrorism.

Artenstein AW.

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artenstein@brown.edu
PMID: 12973895 [PubMed - indexed for MEDLINE]

37: MLO Med Lab Obs. 2004 Feb;36(2):34-8.
Homeland security and bioterrorism applications: detection of bioweapon pathogens by microfluidic-based electrophoretic DNA analysis.
Gluodenis T, Harrison S.
PMID: 15002151 [PubMed - indexed for MEDLINE]

38: Nat Rev Microbiol. 2003 Oct;1(1):70-4.
Bioterrorism and biodefence research: changing the focus of microbiology.
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r.atlas@louisville.edu
Fear that terrorists can use biological agents as weapons of mass destruction is significantly impacting the conduct of microbiological research. Abundant new funds are available for biodefence research, and many researchers are racing to enter the field. There are some concerns, however, that a large emphasis on this issue could skew the microbiology research agenda. Furthermore, new responsibilities for safely conducting research with biothreat agents and concern that information might be misused could drive some researchers away from the field.
PMID: 15040182 [PubMed - in process]

39: Nature. 2004 Feb 26;427(6977):767.
Labs urged to pre-empt bioterrorism threat.
Check E.
Publication Types: News
PMID: 14985722 [PubMed - indexed for MEDLINE]

40: Quintessence Int. 2004 Jan;35(1):74-5.
Biovigilance.
Huber MA, Terezhalmay GT, Moore WS.
Division of Oral Medicine, Dental Diagnostic Science, University of Texas Health Science Center, San Antonio, USA.
PMID: 14765645 [PubMed - indexed for MEDLINE]

41: Radiol Technol. 2003 Nov-Dec;75(2):91-107; quiz 108-10.
Biological, chemical and radiological terrorism.
Furlow B.
After completing this overview of terrorism, readers should be able to: Describe the early signs and symptoms of a covert terrorist attack. Discuss the radiographic signs of exposure to bioterrorism agents. List likely chemical, biological and radiological agents of terrorism. Categorize biological agents of terror by their Centers for Disease Control (CDC) threat level. Explain the relevance of syndromic surveillance in terrorism preparedness.
Publication Types: Review Review, Tutorial

PMID: 14671828 [PubMed - indexed for MEDLINE]

42: Resuscitation. 2003 Sep;58(3):289-92.

The presentation and management of victims of chemical and biological agents: a survey of knowledge of UK clinicians.

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A survey was conducted among acute specialty clinicians in four centres in the UK to determine their levels of knowledge of the presentation and subsequent management of victims following deliberate release of chemical or biological agents. This revealed significant gaps in knowledge and training. Of the 102 respondents, more than half did not understand the decontamination process. More than a third were unsure of the presenting features of nerve agent release. Only a minority knew the recommended treatment and only one in five have participated in relevant exercises.

PMID: 12969606 [PubMed - indexed for MEDLINE]

43: Resuscitation. 2003 Sep;58(3):293-6.

The challenges of deliberate chemical/biological attack.

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Major incident plans in many countries have recently been updated to address the issues surrounding the deliberate release of chemical and biological agents. Despite this, many 'front line' doctors who would be responsible for treating victims of such incidents are poorly integrated into the plans. This article examines some of the challenges that face clinicians in the pre-hospital and hospital phases of a deliberate release incident.

PMID: 12969607 [PubMed - indexed for MEDLINE]

44: Skinmed. 2003 Jul-Aug;2(4):215-21.

Comment in:

Skinmed. 2003 Jul-Aug;2(4):205.

Chemical warfare agents: their past and continuing threat and evolving therapies. Part I of II.

Smith KJ, Skelton H

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Chemical warfare agents are potentially accessible to even underdeveloped nations because they are easily and inexpensively produced. This means that they are ideal for use by terrorists and in military operations against civilian populations and troops. In terms of cutaneous injury, vesicants-mainly sulfur mustard-are the most significant chemical warfare agents. Advances in understanding the pathophysiology of the lesions produced by sulfur mustard have led to the research and development of barrier creams as well as pre- and post-exposure therapies to moderate the damage and accelerate healing. Part I of this paper will discuss the history and classification of chemical agents; PartII, which will appear in the September/October 2003 issue of SKINmed, will discuss characteristic manifestations of exposure to chemical agents, as well as prevention and therapy.

Publication Types: Review Review, Tutorial
PMID: 14673274 [PubMed - indexed for MEDLINE]

45: Skinmed. 2003 Jul-Aug;2(4):205.

Comment on:

Skinmed. 2003 Jul-Aug;2(4):215-21.

Risks and precautions of chemical warfare agents.

Oumeish OY, Wolf R, Parish LC.

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